B.   REMARKS

By this amendment, Claims 7, 19, 25-27 and 34 have been canceled, Claims 1, 8, 13, 20, 28 and 35 have been amended. Hence, Claims 1, 4-6, 8-13, 16-18, 20-24, 28, 31-33, 35-38 and 42 are pending in this application. Note that Claims 25-27 were previously withdrawn by virtue of the prior requirement for restriction and election of claims for examination, but have now been canceled to further the prosecution of this application. The amendments to the claims do not add any new matter to this application. All issues raised in the Final Office Action mailed September 6, 2005 are fully addressed hereinafter.

REJECTION OF CLAIMS 1-24 AND 28-41 UNDER 35 U.S.C. § 102(e)

In the Final Office Action, Claims 1-24 and 28-41 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Chislenko*, U.S. Patent No. 6,041,311. This rejection is moot with respect to canceled Claims 2, 3, 7, 14, 15, 19, 25-27, 29, 30, 34 and 39-41. It is respectfully submitted that the remaining pending Claims 1, 4-6, 8-13, 16-18, 20-24, 28, 31-33, 35-38 and 42, as amended, are patentable over *Chislenko* for at least the reasons provided hereinafter.

CLAIM 1

Claim 1, as amended, is directed to a computer-implemented method for estimating how a user would rate an item that the user has not yet rated that recites:

"in a computer system identifying one or more items that have been rated favorably by the user and that have ratings that satisfy a minimum rating threshold;
in the computer system identifying one or more other users that have rated the one or more items and given ratings to the one or more items that are substantially similar to ratings given by the user to the one or more items; and
in the computer system estimating how the user would rate the item that the user has not yet rated by comparing the ratings given by the one or more other users to the one or more items to ratings given by the one or more other users to the item that the user has not yet rated."

The approach recited in Claim 1 may be better understood with reference to Section 7 "Item Recommendation" of the specification starting on Page 24, and FIGS. 7 and 8. The first step of Claim 1 recites "in a computer system identifying one or more items that have been rated favorably by the user and that have ratings that satisfy a minimum rating threshold." For Example, referring to FIG. 7, rated items 708, 710 (the one or more items) from item space 706 are identified as items that have been rated favorably by user 702 and that have ratings that satisfy a minimum rating threshold. The second step of Claim 1 recites "in the computer system identifying one or more other users that have rated the one or more items and given ratings to the one or more items that are substantially similar to ratings given by the user to the one or more items." Following the same example, user 704 (the one or more other users) has rated items 708, 710 (the one or more items) and has given ratings to items 708, 710 (the one or more items) that are similar to ratings given by user 702 to items 708, 710 (the one or more items). Specification, at Page 24, lines 15-22.

The third step of Claim 1 recites "in the computer system estimating how the user would rate the item that the user has not yet rated by comparing the ratings given by the one or more other users to the one or more items to ratings given by the one or more other users to the item that the user has not yet rated." Again following the same example, an estimation is made how user 702 would rate item 716 (the item that the user has not yet rated) by comparing the ratings made by user 704 (the one or more other users) for items 708, 710 (the one or more items) to ratings made by user 704 (the one or more other users) for item 716 (the item that the user has not yet rated). Specification, at Page 27, lines 5-6. Thus, once user 704 has been identified in the second step of Claim 1 as "the one or more other users," the estimation of how user 702 would rate item 716 (the item that the user has not yet rated) is made not just based upon how

user 704 (the one or more other users) rated item 716 (the item that the user has not yet rated) as

is done in conventional approaches. Rather, in Claim 1, the ratings made by user 704 (the one or

more other users) for items 708, 710 (the one or more items) are compared to the ratings made

by user 704 (the one or more other users) for item 716 (the item that the user has not yet rated).

This approach provides benefits over conventional approaches, as described in the specification

at Page 27, lines 6-11:

> [i]t has been found that the similarity of ratings made by users 702 and 704 for items 708,
> 710 and by user 704 for item 716 provide a strong prediction of how user 702 would rate
> item 716. More specifically, given that users 702 and 704 rated items 708, 710
> substantially similarly, if user 704 has rated item 716 substantially similarly to items 708,
> 710, then it is likely that user 702 will also rate item 716 substantially similarly to items
> 708, 710.

It is respectfully submitted that the third step of Claim 1 is not taught or suggested by

Chislenko. In *Chislenko*, ratings given to items by a user are first correlated to ratings given to

the items by other users to select a set of neighboring users. See, e.g., Col. 2, lines 20-26. Once

the set of neighboring users has been selected, ratings made by the neighboring users for just the

item to be recommended are then used to predict how the user would rate the item. There is no

teaching or suggestion in *Chislenko* of predicting how the user would rate the item by comparing

the ratings made by the neighboring users for the items used to select the neighboring users to

the ratings made by the neighboring users for the item to be recommended. Rather, only the

ratings made by the neighboring users for the item to be recommended are considered to predict

how the user would rate the item. The text at Col. 9, lines 28-48 of *Chislenko* states:

> Once weights are assigned to the neighboring users, an item is recommended to a user
> (step 110). For applications in which positive item recommendations are desired, items
> are recommended if the user's neighboring users have also rated the item highly. For an
> application desiring to warn users away from items, items are displayed as recommended
> against when the user's neighboring users have also given poor ratings to the item. Once
> again, although specialized hardware may be provided to select and weight neighboring

users, an appropriately programmed general-purpose computer may provide these functions.

The item to be recommended may be selected in any fashion, so long as the ratings of the neighboring users, their assigned weights, and the confidence factors, if any, are taken into account. In one embodiment, a rating is predicted for each item that has not yet been rated by the user. This predicted rating can be arrived at by taking a weighted average of the ratings given to those items by the user's neighboring users. A predetermined number of items may then be recommended to the user based on the predicted ratings.

For purposes of explanation, presuming that the neighboring users of *Chislenko* are the user 704 (the one or more other users) of FIG. 7 of the present application, *Chislenko* teaches using only the ratings made by user 704 (the one or more other users) for item 716 (the item that the user has not yet rated) to estimate how user 702 would rate item 716 (the item that the user has not yet rated). *Chislenko* does not teach or suggest comparing the ratings made by user 704 (the one or more other users) for items 708, 710 (the one or more items) to the ratings made by user 704 (the one or more other users) for item 716 (the item that the user has not yet rated) in estimating how user 702 would rate item 716 (the item that the user has not yet rated). It is therefore respectfully submitted that at least the third step of Claim 1 is not taught or suggested by *Chislenko*.

Applicant would like to point out that the text at Col. 2, lines 26-29 of *Chislenko* states "[t]he ratings given to items by the neighboring users as well as the weights assigned to those neighboring users are then used to predict ratings and to make recommendations of items that the user has not yet rated." At first glance, this portion of *Chislenko* might be understood to mean that *Chislenko* teaches using the ratings given by the neighboring users to the items used to select the neighboring users in estimating how the user would rate an item. It is respectfully submitted, however, that when read in conjunction with the rest of *Chislenko*, specifically the text at Col. 9,

lines 27-48, the phrase "ratings given to items by the neighboring users" refers to ratings given to items to be recommended, not items used to select the neighboring users.

In view of the foregoing, it is respectfully submitted that Claim 1, as amended, recites one or more limitations that are not taught or suggested by *Chislenko*.

CLAIMS 4-6 AND 8-12

Claims 4-6 and 8-12 all depend from Claim 1 and include all of the limitations of Claim 1. It is therefore respectfully submitted that Claims 4-6 and 8-12 are patentable over *Chislenko* for at least the reasons set forth herein with respect to Claim 1. Furthermore, it is respectfully submitted that Claims 4-6 and 8-12 recite additional limitations that independently render them patentable over *Chislenko*.

CLAIMS 13, 16-18 AND 20-24

Claims 13, 16-18 and 20-24 recite limitations similar to Claims 1, 4-6 and 8-12, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 13, 16-18 and 20-24 are patentable over *Chislenko* for at least the reasons set forth herein with respect to Claims 1, 4-6 and 8-12.

CLAIMS 28, 31-33, 35-38 AND 42

Claims 28, 31-33, 35-38 and 42 recite limitations similar to Claims 1, 4-6 and 8-12, except in the context of apparatuses. It is therefore respectfully submitted that Claims 28, 31-33, 35-38 and 42 are patentable over *Chislenko* for at least the reasons set forth herein with respect to Claims 1, 4-6 and 8-12. In view of the foregoing, it is respectfully submitted that Claims 28, 31-33, 35-38 and 42 are patentable over *Chislenko*.

CONCLUSION

It is respectfully submitted that all of the pending claims are in condition for allowance and the issuance of a notice of allowance is respectfully requested. If there are any additional charges, please charge them to Deposit Account No. 50-1302.

The Examiner is invited to contact the undersigned by telephone if the Examiner believes that such contact would be helpful in furthering the prosecution of this application.

Respectfully submitted,

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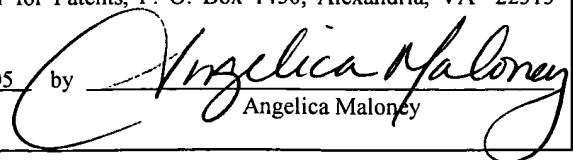Reg. No. 37,777
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